

# BIAC New User Orientation

Marissa Bruce | Duke-UNC Brain Imaging and Analysis Center

# Agenda

- Introductions
- Facilities
- Scheduling
- Calendar Entries
- MR Safety
- Scan Session
- BIAC Resources
- BIAC Billing System
- FAQs

# Introductions

# Welcome to BIAC!

- The Brain Imaging and Analysis Center (BIAC) was created in 1998 as the key component of the campus-wide neuroimaging initiative
- We are now home to more than sixty researchers and staff members from throughout Duke University and UNC-Chapel Hill, and across diverse disciplines



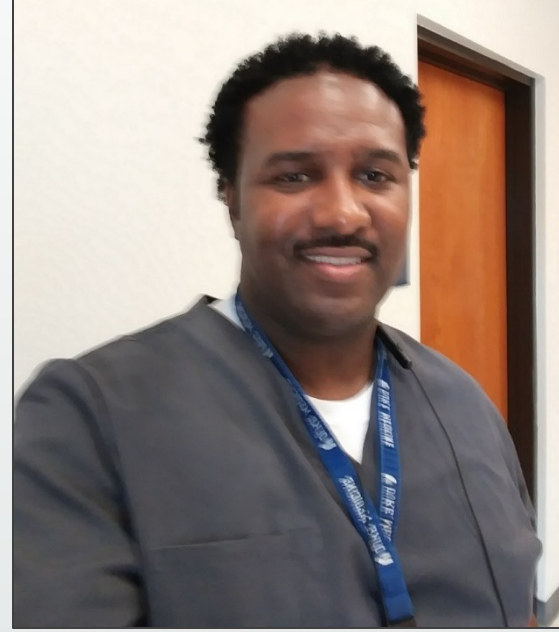
# Introductions: Dr. Todd Harshbarger & MR Technologists



Dr. Todd Harshbarger  
*Director of MR Operations*



Susan Music



Lamont Conyers



Jennifer Graves

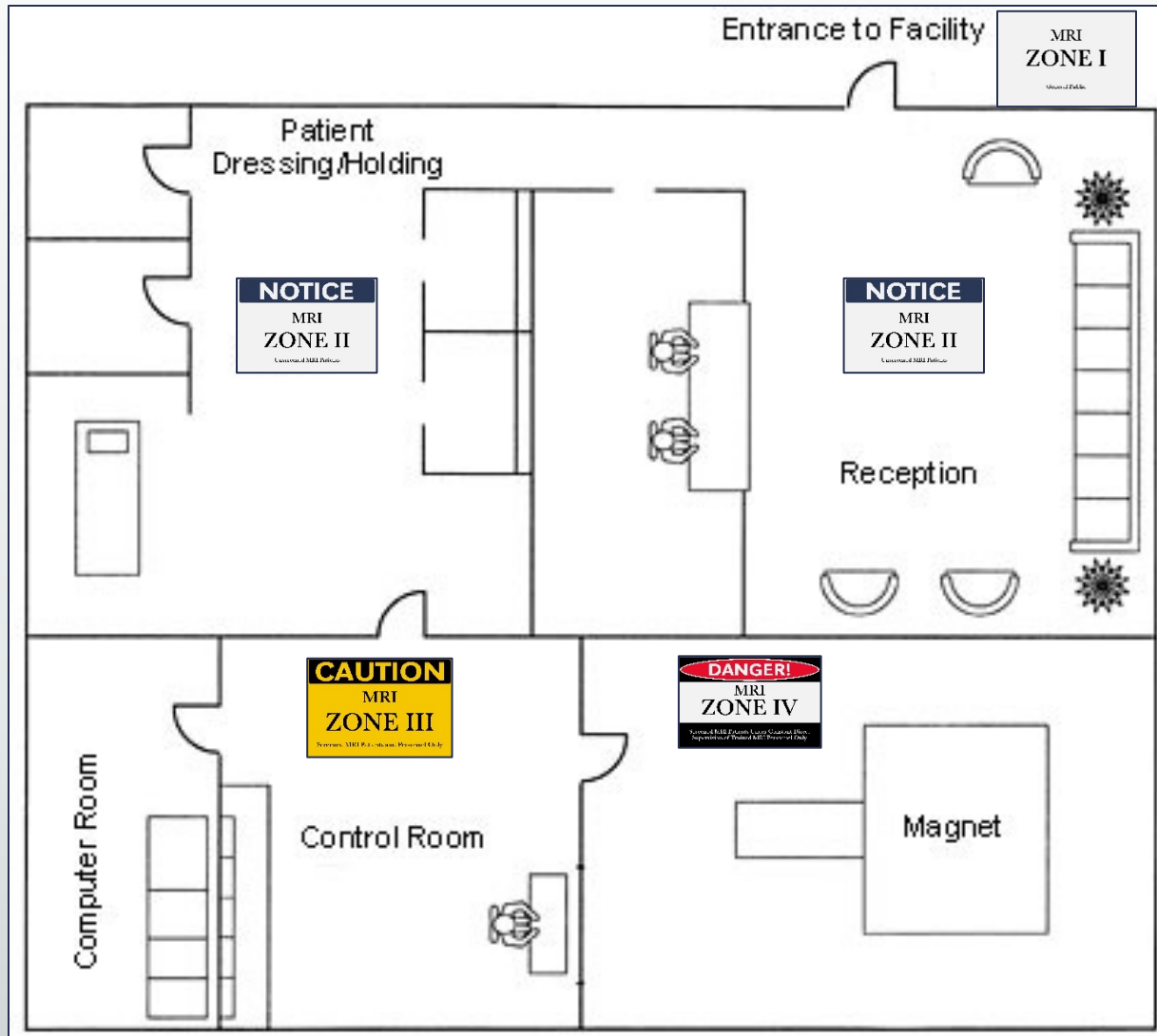
# Facilities

# Where is BIAC located?

- The main BIAC offices are housed in the Davison Building, fourth floor (Duke Hospital South Green Zone)
- Duke Hospital North houses our research-dedicated MRI suites



# Zone Locations & Entry Requirements



- **Zone I**
  - All areas accessible to the general public
- **Zone II**
  - Areas between the public-accessible Zone I and restricted areas of Zone III and IV
- **Zone III**
  - Area where free access by unscreened non-MR personnel or ferromagnetic objects or equipment can result in serious injury or death
- **Zone 4**
  - MR scanner room



# Mock Scanner (Mock I)



# Testing Room (Test I)



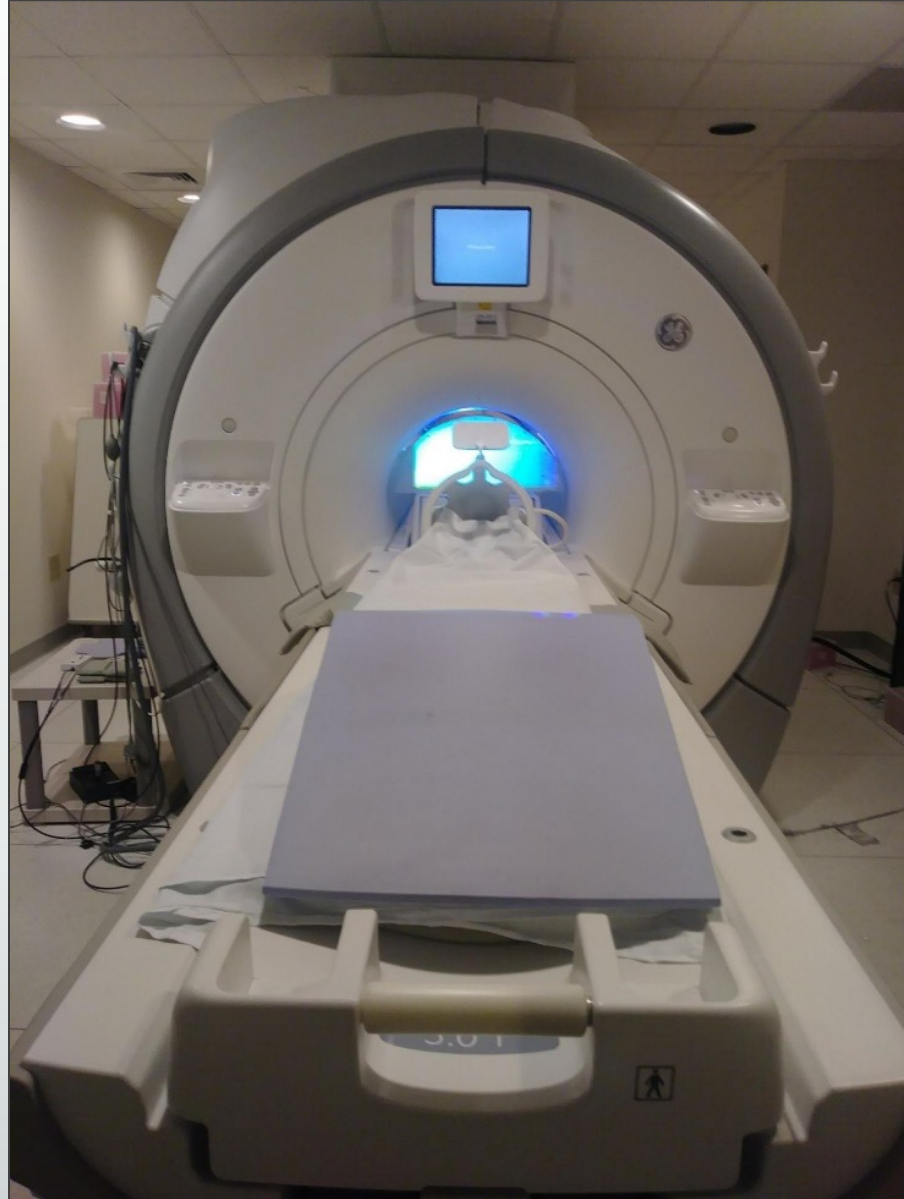
# DHNI



# DAVI



# BIAC5



# BIAC6



# Scheduling (Pre-Scan)

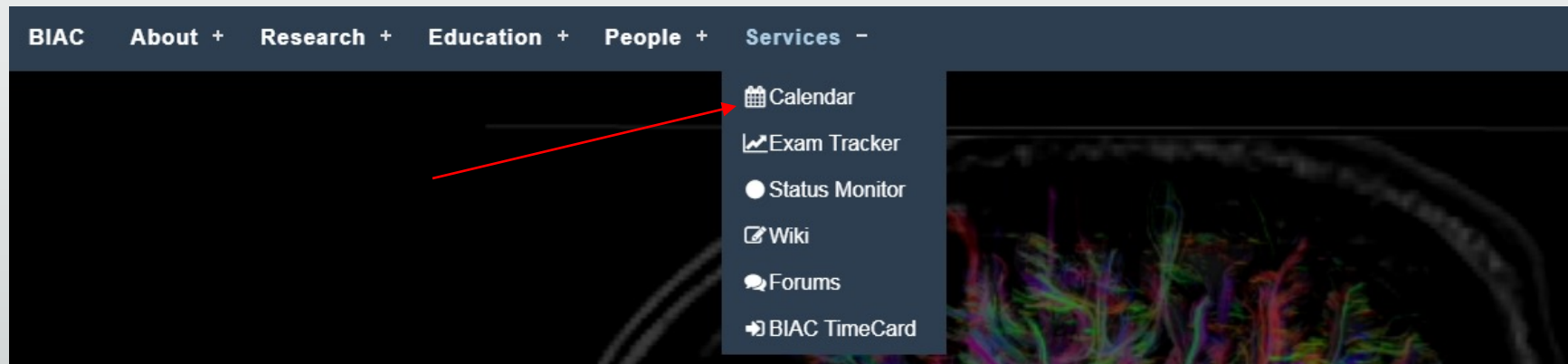
# Accounts

- **BIAC Computer Access** - Use your DHE account to log on to BIAC computers. If you need access to BIAC computers, send an email to [help@biac.duke.edu](mailto:help@biac.duke.edu). Please include the following information:
  - First name
  - Preferred name (nickname)
  - Last name
  - [Duke NetID](#) (required; request one [here](#))
  - DHE account (required; when requesting NetID at above link, also specify you need a DHE account in the Comments field)
  - Duke Unique ID (7-digit number on the back of your [Duke ID](#))
  - Duke Card # (if you need card key access; 9-digit number on the back of your [Duke ID](#))
  - Institution (Duke, UNC, Other-specify)
  - Department (BIAC, CCN, Radiology, Psychology, Psychiatry, Other-specify)
  - Position (Faculty, Staff, Postdoc, Grad Student, Undergrad, Fellow, Resident, Med Student, Other)
  - Current Email Address (Duke or UNC address preferred)
  - Renewal period (3/6/9/12 months)
  - BIAC Sponsor (BIAC faculty/staff/postdoc or other faculty running an experiment at BIAC)
  - BIAC Sponsor Email
  - **Please have your Sponsor send us a confirmation email.**
- **BIAC Compute Cluster Access** - Use your DHE account to log on to the [BIAC Linux Cluster](#). All registered BIAC Users will have usage privileges.

- <https://wiki.biac.duke.edu/biac:accounts>

# Scheduling

- Most often, the experimenter (i.e. the person running the subject) schedules a session on a BIAC scanner
- We strongly encourage you to enter real participant information
  - If a subject is lost and calls the BIAC office, having their name in the calendar helps us find out where they need to be
- It is the expectation that you have a participant when you reserve a slot





# Scheduling: Calendar Page

- Click on a cell to reserve that time slot

## BIAC Scanner Schedule

[Experiment Info Page](#)  
[MR Tech Schedule](#)

Scanner:

Start Time:

Stop Time:

| S         | M         | T         | W         | T         | F         | S         |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 1         | 2         | 3         | 4         | 5         | 6         | 7         |
| 8         | 9         | 10        | 11        | 12        | 13        | 14        |
| <b>15</b> | <b>16</b> | <b>17</b> | <b>18</b> | <b>19</b> | <b>20</b> | <b>21</b> |
| 22        | 23        | 24        | 25        | 26        | 27        | 28        |
| 29        | 30        |           |           |           |           |           |

**Experimenters must complete all calendar entries for their experiments.**

| Color Key     |          |
|---------------|----------|
| Info Complete | Canceled |
| Info Missing  | Overlap  |

Calendar version 1.7.10 [2020.09.19]  
 by [Francis Favorini](#).

|          | Sunday<br>9/15/2019      | Monday<br>9/16/2019               | Tuesday<br>9/17/2019   | Wednesday<br>9/18/2019                             | Thursday<br>9/19/2019                                   | Friday<br>9/20/2019   | Saturday<br>9/21/2019                    |
|----------|--------------------------|-----------------------------------|--|--|---|---|--|
|          | <a href="#">Add item</a> | <a href="#">Add item</a>          | <a href="#">Add item</a>                                     | <a href="#">Add item</a>                           | BIAC6 down after 2:30pm                                 | BIAC6 down all day  | tech coverage 9 -7<br>BIAC6 down all day |
| 8:00 AM  |                          |                                   |  | IntractEP.01<br>Saurabh Sinha                      |   |   |  |
| 9:00 AM  |                          | QA.04<br>None                     | CPalloCB.01<br>Jessica Sun                                   | QA.04<br>None                                      | QA.04<br>None   | Lifespan.01<br>John Graner  | Null.01                                  |
| 10:00 AM |                          |                                   | CPalloCB.01<br>Jessica Sun                                   | ConnNeuro.01<br>Taylor Ikner                       | BrainSpine.01<br>UserTest.01                            | BrainSpine.01<br>Lindsie Boerger<br>10:00 AM-12:00 PM<br>Canceled | Null.01<br>None                          |
| 11:00 AM |                          | ConnNeuro.01<br>Jeremiah Hartsock | CPalloCB.01<br>Jessica Sun<br>11:00 AM-1:00 PM<br>01261      | UserTest.01  | SysDevelop.53   | Scanner_Down  | Null.01                                  |
| 12:00 PM |                          | SysDevelop.53                     | SysDevelop.53  | SysDevelop.53<br>Dean Darnell                      | memdm.01<br>Joanna Salerno<br>12:00 PM-1:30 PM<br>01283 | NoTech.01<br>None   |  |
| 1:00 PM  |                          | WMTMS.02                          | BrainSpine.01<br>Lindsie Boerger<br>1:00 PM-3:00 PM<br>01262 | UserTest.01  | ConnNeuro.01<br>Jeremiah Hartsock                       | rtADHD.02<br>Kelly Eom<br>1:00 PM-2:30 PM<br>Canceled             | QA.04                                    |
| 2:00 PM  |                          | NoTech.01                         |  | rtADHD.02<br>Kelly Eom<br>2:00 PM-3:30 PM<br>01274 | NoTech.01   | Null.01   | NoTech.01<br>None                        |
| 3:00 PM  |                          | UserTest.01<br>Angela Cook        | ConnNeuro.01<br>Jeremiah Hartsock                            | NTREC.01<br>Catherine Maloney                      |   |   | ConnNeuro.01<br>Jeremiah Hartsock        |
| 4:00 PM  |                          | ConnNeuro.01<br>Jeremiah Hartsock | Null.01  | SysDevelop.53                                      | NoTech.01   |   | Null.01<br>Michael De Bellis             |
| 5:00 PM  |                          | UserTest.01<br>Devin Willey       | SysDevelop.53  | SysDevelop.53                                      |   | WMTMS.02<br>Hannah Palmer<br>4:30 PM-6:00 PM<br>Canceled          | Null.01                                  |
| 6:00 PM  |                          | UserTest.01<br>Dean Darnell       | UserTest.01  | NTREC.01<br>Catherine Maloney                      |   |   |  |
| 7:00 PM  |                          | SysDevelop.53                     | SysDevelop.53  | SysDevelop.53                                      |   |   | NoTech.01                                |
| 8:00 PM  |                          |                                   | QA.04  | NTREC.01<br>Catherine Maloney                      |   |   |  |
| 9:00 PM  |                          |                                   | NTREC.01<br>Catherine Maloney                                | SysDevelop.53                                      |   |   |  |
|          |                          |                                   |  | SysDevelop.03                                      |   |   |  |

# Scheduling: Study Details

## Study Details

[Experiment Info Page for Screen.01](#)

|          |          |        |                                |           |               |               |
|----------|----------|--------|--------------------------------|-----------|---------------|---------------|
| Date     | 6/1/2015 | Monday | *Start Time                    | 11:30 AM  | *End Time     | 12:30 PM      |
| *Scanner | MOCK1    |        | *Experiment                    | Screen.01 | *Experimenter | Marissa Bruce |
| Subject  |          |        | <a href="#">Change Subject</a> |           | *Subject Type | Human         |
| Notes    |          |        |                                |           |               |               |

\*Required fields.

[Add](#) [Don't Add](#)

# Scheduling

- How far in advance can you schedule?

**Experiment Information for Screen.01**

Go back to [main calendar view](#).  
 Show [all experiments](#) user "mcb104" has access to.  
 View [disk quota information](#) for this experiment.

**Summary**  
 This experiment is currently valid.  
 This experiment's scheduling window allows you to schedule through 7/30/2019.  
 This experiment has 2 incomplete calendar entries ([see below](#)).

You may contact the [BIAC Scientific Review Committee](#) to request more time or to renew your experiment.  
 See [SOP109: Approval for BIAC Scanner Use](#) for more details.

| Experiment | Scanner | Investigator               | Responsible Investigator   | Department | Start Date | End Date  | Title   |
|------------|---------|----------------------------|----------------------------|------------|------------|-----------|---|
| Screen.01  | MOCK1   | <a href="#">Allen Song</a> | <a href="#">Allen Song</a> | BIAC       | 9/20/2004  | 9/13/2019 | Screening for Participation in MRI Subject Pool |

| Experiment | Time Allocated (hours) | Time Left (hours) | Time Used (hours) | Lost Time [Claimed] (hours) | Total Time (hours) | Scheduling Window (5/28/2019 - 6/18/2019) |                        |                         | Scheduling Window (6/19/2019 - 7/30/2019) |                        |                         |
|------------|------------------------|-------------------|-------------------|-----------------------------|--------------------|---|------------------------|-------------------------|---|------------------------|-------------------------|
|            |                        |                   |                   |                             |                    | Window Size (days)                        | Max Study Size (hours) | Max Weekly Time (hours) | Window Size (days)                        | Max Study Size (hours) | Max Weekly Time (hours) |
| Screen.01  | 4500                   | 431               | 4069              | 0 [0]                       | 4069               | 21  | 4                      | None                    | 42  | 4                      | 6                       |

| Experiment | IRB Protocol | Principal Investigator     | Start Date | End Date  |
|------------|--------------|----------------------------|------------|-----------|
| Screen.01  | 00010672R11  | <a href="#">Allen Song</a> | 8/22/2018  | 9/13/2019 |

| Experiment | Name                             | Username | Scheduling Permissions   |
|------------|----------------------------------|----------|--|
| Screen.01  | <a href="#">Sharena Ballard</a>  | sb237    | Read, View Transactions, View Billing  |
| Screen.01  | <a href="#">Marissa Bruce</a>    | mcb104   | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Lamont Conyers</a>   | conye001 | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Francis Favorini</a> | favorini | Read, Write, Delete Anytime, Edit Anytime, Schedule Anytime, View Transactions, View Billing |
| Screen.01  | <a href="#">Amanda Griffin</a>   | ane5     | Read, Write, Delete Anytime, Edit Anytime, Schedule Anytime, View Transactions, View Billing |
| Screen.01  | <a href="#">Todd Harshbarger</a> | tth6     | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Jen Louya</a>        | jel76    | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Susan Music</a>      | som2     | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Elena Musty</a>      | em123    | Read, View Transactions, View Billing  |
| Screen.01  | <a href="#">Allen Song</a>       | asong    | Read, Write, View Transactions   |

| Experiment | Directory | Name | Username | Data Permissions |
|------------|-----------|------|----------|------------------|
| Screen.01  | None      | None | None     | None             |

View [disk quota information](#) for this experiment.

**Please fix the following incomplete calendar entries!**

| Experiment                | Date      | Start    | End      | Scanner | Experimenter     |
|---------------------------|-----------|----------|----------|---------|------------------|
| <a href="#">Screen.01</a> | 9/21/2006 | 1:00 PM  | 2:00 PM  | MOCK1   | Maura Styczynski |
| <a href="#">Screen.01</a> | 9/21/2006 | 12:00 PM | 12:30 PM | MOCK1   | Maura Styczynski |

# Scheduling: Last Minute Scheduling

- Last minute scheduling
  - If a last minute scan is scheduled at the beginning or end of the day, please contact the MR Techs ([BIAC-Schedule@duke.edu](mailto:BIAC-Schedule@duke.edu)) to ensure that coverage will be provided
  - We recommend 1-2 hours notice



# MR Tech Schedule

- Normal tech coverage
- Be sure to check the notes (in blue) at the top of the scanner schedule to see exceptions to the normal tech schedule

**Thursday**  
**5/23/2019**

[Single tech coverage 3p-6p](#)

**BIAC Scanner Schedule**

[Experiment Info Page](#)  
[MR Tech and Pre-Sold Slots Schedule](#)

Scanner:

Start Time:

Stop Time:

Susan ■  
 Lamont ■  
 Jennifer ■

**MR Tech Schedule (Effective November 2021)**

| Time                | Monday                              | Tuesday                               | Wednesday                           | Thursday                              | Friday                                | Saturday                             |
|---------------------|-------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| 8:00 AM - 9:00 AM   |                                     |                                       |                                     |                                       |                                       | ***                                  |
| 9:00 AM - 10:00 AM  | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 10:00 AM - 11:00 AM | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 11:00 AM - 12:00 PM | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 12:00 PM - 1:00 PM  | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 1:00 PM - 2:00 PM   | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 2:00 PM - 3:00 PM   | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 3:00 PM - 4:00 PM   | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 4:00 PM - 5:00 PM   | <span style="color: blue;">■</span> | <span style="color: yellow;">■</span> | <span style="color: blue;">■</span> | <span style="color: blue;">■</span>   | <span style="color: yellow;">■</span> | <span style="color: green;">■</span> |
| 5:00 PM - 6:00 PM   |                                     | <span style="color: yellow;">■</span> |                                     | <span style="color: yellow;">■</span> |                                       | <span style="color: green;">■</span> |
| 6:00 PM - 7:00 PM   |                                     | <span style="color: green;">■</span>  |                                     | <span style="color: green;">■</span>  |                                       | <span style="color: green;">■</span> |
| 7:00 PM - 8:00 PM   |                                     |                                       |                                     |                                       |                                       | <span style="color: green;">■</span> |

\*\*\* - We have returned to alternate Saturday coverage. Check the calendar for availability. For weeks with Saturday coverage, only two techs will be available on Thursdays (shown in blue and yellow above). When there is no Saturday coverage, there will be additional Thursday coverage (shown in green).

# Null.01

- Should **ONLY** be used to avoid double-booking a MR Tech
- The experimenter is responsible for placing Null.01 on the opposite scanner during single MR Tech coverage
- If you think someone forgot to schedule a Null.01, please contact the BIAC office before scheduling your study
- In the event of a double-booking, the study that scheduled first (**but failed to add a Null**) will be **rescheduled**

# Null.01

- Be sure to check the notes (in blue) at the top of the scanner schedule to see exceptions to the normal tech schedule
  - If your study starts at a time when there are 2 techs available and continues to a time when only 1 is available, you need to put a Null.01 on the opposite calendar for just the time there is only 1 tech available

**BIAC Scanner Schedule**

[Experiment Info Page](#)  
[MR Tech and Pre-Sold Slots Schedule](#)

Scanner:

Start Time:

Stop Time:

|          | Sunday<br>5/10/2015      | Monday<br>5/11/2015   | Tuesday<br>5/12/2015                               | Wednesday<br>5/13/2015   | Thursday<br>5/14/2015                          | Friday<br>5/15/2015                             | Saturday<br>5/16/2015    |
|----------|--------------------------|---|--|--|--|---|--------------------------|
|          | <a href="#">Add item</a> | <a href="#">No tech 8-Noon. Single tech coverage noon-10pm.</a> | <a href="#">Add item</a>                           | <a href="#">Normal tech coverage to 4pm one tech after 4pm</a><br><a href="#">Luke Out at 1230 pm.</a> | <a href="#">One tech 2-6, no tech after 6.</a> | <a href="#">Add item</a>                        | <a href="#">Add item</a> |
| 8:00 AM  |                          |   | UserTest.01  | QA.04  |  |   |                          |
| 9:00 AM  |                          |   | ConUp.01<br>Emma Dowd<br>8:30 AM-10:00 AM<br>19765 |  |  | SAT.01<br>Hanna Oh<br>8:30 AM-10:00 AM<br>19775 |                          |
| 10:00 AM |                          |   | UserTest.01<br>Jessica Stanek                      | UserTest.01<br>Jessica Stanek  | SAT.01<br>Hanna Oh<br>9:30 AM-11:00 AM         | UserTest.01                                     | QA.04                    |

# Delete Study vs. Cancel Study

- If >48 hours before start time, scan can only be deleted
  - Will be removed completely from calendar
- If <48 hours before study start time, scan can only be canceled
  - A cancellation fee will apply and the calendar entry will turn red

**Study Details**

[Experiment Info Page for Demo.01](#)

Schedule ID

\*Date

\*Scanner

Subject

Notes

\*Start Time

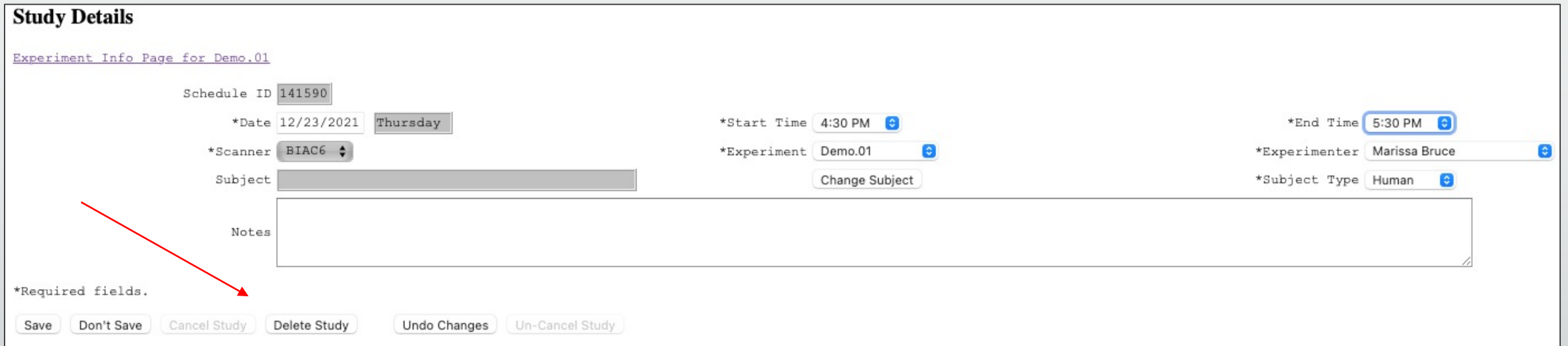
\*Experiment

\*End Time

\*Experimenter

\*Subject Type

\*Required fields.





# Effective November 1, 2020

- There must be at least 30 minutes scheduled as Null.01 or Cleaning.01 before each scan to allow time for the MR Tech to sanitize the space
- Users must sign-off that they have cleaned each testing room after use
- Please do not leave a gap more than 1.5 hours between your scan and another scan on the same day when possible (to avoid idle staff time)
- Email [BIAC-Schedule@duke.edu](mailto:BIAC-Schedule@duke.edu) or print a copy of the **MRI Safety Screening Form**
- Masks **MUST** be worn by researchers and participants at ALL times
  - This includes in the scanner (may increase claustrophobia and anxiety in participants)

# Calendar Entries (Post-Scan)

# Calendar Entries

- Who is responsible for completing calendar entries?
  - The experimenter running the study (NOT the MR Tech)
- What about if I use MockI, TestI, DHNI, and DAVI?
  - Those entries still need to be completed!
- Calendar items YOU are required to complete:
  - Actual Start and End Times
  - Experimenter
  - Exam Number(s)
  - MR Tech
  - Subject Name\*\*
  - Subject Type
  - Consent Form Signed
  - Problem (if applicable)
  - Lost Time (if BIAC problem)





# Calendar Entries: Completed Items

- **Exam Number(s)**
  - The MR Tech will have this number at the time of the scan
  - The Experimenter should enter this number in the calendar
- **Experimenter**
  - Enter the actual person at the scanner running the session
- **MR Tech**
  - The Experimenter should enter the Tech name in the calendar entry
- **Subject Name**
  - Experimenter should enter this info prior to the scan
- **Problem (if applicable)**
  - The Experimenter should enter any problem that arises. Use the “problem details” field to elaborate further

# Calendar Entries: Completed Items

## Study Details

[Experiment Info Page](#)

Schedule ID 121497

Study ID 190514\_00000

Scheduled Times 2:00 PM - 4:00 PM

Date 5/14/2019 Tuesday

→ \*Actual Start Time 2:00 PM

→ \*Actual End Time 4:00 PM

Scanner BIAC5

→ \*Experiment

→ \*Experimenter None

→ \*First Exam # 00000

\*Last Exam # 00000

→ \*MR Tech None

→ Subject

Change Subject

→ \*Subject Type None

→ Consent Form Signed

→ \*Amount Paid \$ 0.00

→ \*Problem None

Completed

→ Lost Time 0 minutes

Problem Details

Notes

\*Required fields.

Save Don't Save Cancel Study Delete Study Undo Changes Un-Cancel Study

# Null.01

- Do **NOT** use Null.01 for the following situations:
  - As a placeholder for an experiment
  - User Tests
- Do **NOT** list any subject information/PHI in the Null.01 calendar entry. Only list the Experimenter's name so that it can be matched to the actual scan on the opposite scanner
  - All users have access to Null.01 calendar entries. If you list the subject's information in the Null.01 entry, you have just publicized PHI
- **If you delete/cancel a scan, remember to delete/cancel the Null.01 on the opposite scanner if it was used**



# Policy on Excessive Scheduling Errors

- If a user/scheduler fails to schedule Null.01 during single tech coverage or schedules all/part of their session outside of the normal or posted tech hours the following will happen:
  - **1<sup>st</sup> Offense:** Scheduler gets notified about the policy and New User Orientation.
  - **2<sup>nd</sup> Offense:** MR Operations Director, Dr. Todd Harshbarger, notifies the Scheduler and the Responsible PI about the severity of the situation, the second offense, and that on the third offense scheduling rights will be taken away.
  - **3<sup>rd</sup> Offense:** BIAC Director, Dr. Allen Song, notifies the Scheduler and the Responsible PI that the third offense has occurred and that the scheduler's scheduling rights have been removed.

# Claiming Lost Time

- Lost Time should only be claimed if you are unable to use all or any part of your data due to a BIAC-related problem
- BIAC will enter lost time for the following situations:
  - No Tech Available\*
  - BIAC Scanner Down
  - Severe Weather (Duke Policy Activated)
- If your scan encountered a BIAC problem, please be sure to submit a **trouble ticket** ASAP so that the problem can be investigated and avoided for future scans!

# Trouble Tickets

- Trouble tickets can be submitted by clicking on the “Services” tab on the BIAC Homepage or by visiting [www.biac.duke.edu/services/](http://www.biac.duke.edu/services/)

**biac** Duke-UNC Brain Imaging and Analysis Center

About | Research | Education | People | Facilities | Services

Services

Scanner Calendar  
Trouble Ticket  
Exam Tracker  
Status Monitor  
Documentation Wiki  
Forums  
BIAC Time Card

# Experiment Information

- If your experiment is not available in the drop-down list, you should check the Experiment Info page for details

**Study Details**

[Experiment Info Page for Screen.01](#)

Date: 5/24/2019 Friday

\*Scanner: MOCK1

Subject: [Redacted]

\*Start Time: 11:00 AM

\*Experiment: Screen.01

\*End Time: 12:00 PM

\*Experimenter: Marissa Bruce

\*Subject Type: Human

Change Subject

Notes

\*Required fields.

Add Don't Add

### BIAC Scanner Schedule

[Experiment Info Page](#)  
[MR Tech and Pre-Sold Slots Schedule](#)

Scanner: BIAC5

Start Time: 8:00 AM

Stop Time: 10:00 PM

# Experiment Information

- 1. Has your experiment expired?

- 2. Has the experiment run out of hours?

- 3. Is the IRB protocol expired?

- 4. Do you have any incomplete calendar entries?

**Experiment Information for Screen.01**

Go back to [main calendar view](#).  
 Show [all experiments](#) user "mcb104" has access to.  
 View [disk quota information](#) for this experiment.

**Summary**  
 This experiment is currently valid.  
 This experiment's scheduling window allows you to schedule through 7/30/2019.  
 This experiment has 2 incomplete calendar entries ([see below](#)).

You may contact the [BIAC Scientific Review Committee](#) to request more time or to renew your experiment.  
 See [SOP109: Approval for BIAC Scanner Use](#) for more details.

| Experiment | Scanner | Investigator               | Responsible Investigator   | Department | Start Date | End Date  | Title   |
|------------|---------|----------------------------|----------------------------|------------|------------|-----------|---|
| Screen.01  | MOCK1   | <a href="#">Allen Song</a> | <a href="#">Allen Song</a> | BIAC       | 9/20/2004  | 9/13/2019 | Screening for Participation in MRI Subject Pool |

| Experiment | Time Allocated (hours) | Time Left (hours) | Time Used (hours) | Lost Time [Claimed] (hours) | Total Time (hours) | Scheduling Window (5/28/2019 - 6/18/2019) |                        |                         | Scheduling Window (6/19/2019 - 7/30/2019) |                        |                         |
|------------|------------------------|-------------------|-------------------|-----------------------------|--------------------|---|------------------------|-------------------------|---|------------------------|-------------------------|
|            |                        |                   |                   |                             |                    | Window Size (days)                        | Max Study Size (hours) | Max Weekly Time (hours) | Window Size (days)                        | Max Study Size (hours) | Max Weekly Time (hours) |
| Screen.01  | 4500                   | 431               | 4069              | 0 [0]                       | 4069               | 21  | 4                      | None                    | 42  | 4                      | 6                       |

| Experiment | IRB Protocol | Principal Investigator     | Start Date | End Date  |
|------------|--------------|----------------------------|------------|-----------|
| Screen.01  | 00010672R11  | <a href="#">Allen Song</a> | 8/22/2018  | 9/13/2019 |

| Experiment | Name                             | Username | Scheduling Permissions   |
|------------|----------------------------------|----------|--|
| Screen.01  | <a href="#">Sharena Ballard</a>  | sb237    | Read, View Transactions, View Billing  |
| Screen.01  | <a href="#">Marissa Bruce</a>    | mcb104   | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Lamont Conyers</a>   | conye001 | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Francis Favorini</a> | favorini | Read, Write, Delete Anytime, Edit Anytime, Schedule Anytime, View Transactions, View Billing |
| Screen.01  | <a href="#">Amanda Griffin</a>   | ane5     | Read, Write, Delete Anytime, Edit Anytime, Schedule Anytime, View Transactions, View Billing |
| Screen.01  | <a href="#">Todd Harshbarger</a> | tbh6     | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Jen Louya</a>        | jel76    | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Susan Music</a>      | som2     | Read, Write, View Transactions   |
| Screen.01  | <a href="#">Elena Musty</a>      | em123    | Read, View Transactions, View Billing  |
| Screen.01  | <a href="#">Allen Song</a>       | asong    | Read, Write, View Transactions   |

| Experiment | Directory | Name | Username | Data Permissions |
|------------|-----------|------|----------|------------------|
| Screen.01  | None      | None | None     | None             |

View [disk quota information](#) for this experiment.

Please fix the following incomplete calendar entries!

| Experiment                | Date      | Start    | End      | Scanner | Experimenter     |
|---------------------------|-----------|----------|----------|---------|------------------|
| <a href="#">Screen.01</a> | 9/21/2006 | 1:00 PM  | 2:00 PM  | MOCK1   | Maura Styczynski |
| <a href="#">Screen.01</a> | 9/21/2006 | 12:00 PM | 12:30 PM | MOCK1   | Maura Styczynski |

# Common Scheduling/Calendar Errors

- Not knowing who is responsible for what
- Scheduled without subject
- Experiment has no hours left
- Experiment/IRB protocol has expired
- Improper Null.01 use
- Improper UserTest.01 use
  - This is NOT a placeholder for an experiment
- Incomplete calendar entries
  - No subject info
  - Missing exam number
  - MR Tech not listed
  - Lost time not claimed properly
  - MockI/TestI/DHNI/DAVI entries are not completed

# MR Safety

# MR Safety

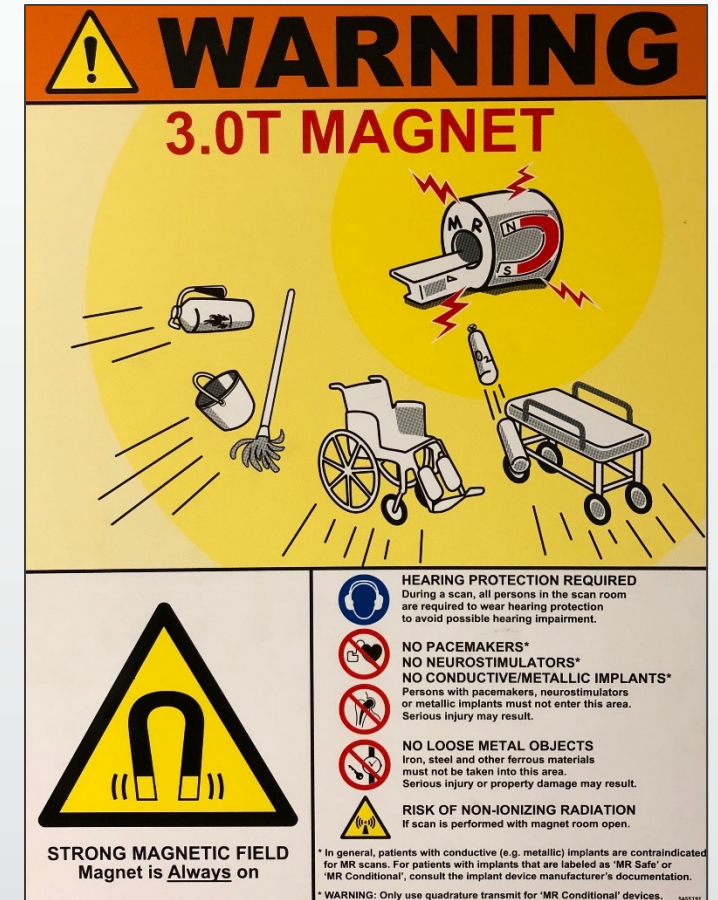
- 24 hrs/day
- 365 days/year
- The magnetic field is on even when the magnet is **NOT** in use.
- Even if the electrical portion of the machine is off, the magnetic field is still up
- The MR technologist has final say in who may be allowed to go into the operation and/or scanner room.





# MR Safety

- The force of the field is measured in Tesla (T)
  - Our scanners are measured at 3.0 Tesla (T)
- The force of the field is greatest at the center of the magnet.
  - The magnetic FORCE INCREASES as you move closer to the center of the magnet
- What is not attracted to the magnet outside the fringe field can be attracted to the magnet as you move closer to the center of the machine



**Subject Safety is our #1 Concern!**

# MR Safety: Medical Implants

- Medical Implants
  - Review Dr. Frank Shellock's MRI contraindication database: [www.mrisafety.com](http://www.mrisafety.com)
- At least 3 days before your exam, email [BIAC-Schedule@duke.edu](mailto:BIAC-Schedule@duke.edu) with the device model and manufacturer of any medical implants
  - They will reply via email regarding eligibility
- It is the Experimenter's responsibility to get approval prior to the scan!

## Magnetic Resonance Imaging Tips for Scanning Patients with Implants

**BEFORE**

- Follow your site's process for screening the patient
- Identify the manufacturer and model of any implanted devices
- Locate the MRI safety information in the device manufacturer's labeling

Look for one of these icons:

- MR Safe.** Patients with MR Safe devices have no scanning restrictions.
- MR Conditional.** For patients with MR Conditional devices, implant conditions should be matched with the MR system information.
  - Consult your MR system manual for MR system information
  - Ensure that the MR system meets all conditions provided in the MR Conditional labeling
  - If conditions are not met, the patient should not be scanned
- MR Unsafe.** Patients with MR Unsafe devices should not be scanned. Assume any unidentified implant is MR Unsafe.

**BEFORE (continued)**

- Document device information in the medical record
- Consult a physician for any risk/benefit decisions
- For MR Conditional devices:
  - Follow all pre-scan conditions, such as special programming modes

**DURING**

- For MR Conditional devices, follow all scan conditions such as specific absorption rate (SAR) restrictions or patient positioning instructions
- Monitor the patient at all times

**AFTER**

- Assess the patient for discomfort or injuries
- Follow any post-scan conditions, such as device checks or programming

FDA U.S. FOOD & DRUG ADMINISTRATION | SMRT A WORLD OF KNOWLEDGE PROFESSIONALS

# MR Safety: Pregnancy Tests

- Women of childbearing potential must receive a urine pregnancy test immediately prior to each MRI Scan
- Very limited exceptions:
  - Females who have not yet menstruated
  - Post-menopausal females
  - Females who have had a hysterectomy
- Supplies are available at the scanners
- Experimenter should facilitate urine collection
- MR Tech will perform pregnancy test
- Participant sex must be listed on the calendar!



# Scan Session

# Scanner Access

- How to get BIAC Level I Access:
  - (1) Read and sign off on all relevant SOPs on the *Signature Sheet: Level I MRI Access*
  - (2) Read the *MRI Safety Tutorial* and watch *MRI Safety Video*
  - (3) Complete the online *Safety Quiz*
  - (4) Complete the *MRI Safety Screening* form
  - (5) Attend *BIAC New User Orientation*
  - (6) Return completed forms to BIAC
  - (7) Email [help@biac.duke.edu](mailto:help@biac.duke.edu) with your Duke Unique ID and your HID-Activated Card Number

# Pre-Scan Screening

- All subjects must be either phone screened or interviewed for MRI safety in person before being scheduled for a scan
  - Highly recommended to administer official BIAC MRI Safety Screening Form
  
- Any questions or concerns about MRI safety found in the initial screening should be sent to [BIAC-Schedule@duke.edu](mailto:BIAC-Schedule@duke.edu) at least 48 hours before the scan (note: at least 72 hours for implant information)

# Pre-Scan Screening

- MRI Techs typically are meeting subjects for the first time the day of the scan and are a last line of defense
- Responsibility to determine initial MRI safety and subject quality is up to individual lab faculty and staff (unless using BIAC volunteer registry)
- Thorough review of medical history
  - May require obtaining medical record authorization to review make and model of any implanted metal or part of medical history
  - Emphasis on reviewing and researching any past surgeries as many subjects may not know they have implanted metal after certain procedures (i.e. wire sutures or a screw/pin)
  - Even if implants are deemed safe for scanning, they may cause artifacts

# Examples of Pre-Screening Resources

## ■ Phone Screening Script

### **BIAC Phone Screening**

#### **Part I: Initial Contact**

Good morning/afternoon, my name is Marissa Bruce and I'm calling from the Duke Brain Imaging and Analysis center. Are you free now to hear more about our studies?

**If yes.**  
Great. Would you be free to do the phone screening now?

**If no.**  
Is there a better time for you to do the phone screening?

#### **Part II: BIAC Research Summary**

**If yes.**  
Our research uses functional magnetic resonance imaging to take pictures of your brain while you are doing a psychology experiment. We study the areas of the brain associated with things like memory, attention, and perception. We have a number of studies going on at any one time, and our studies are **conducted** at the MRI center at Duke Hospital.

If you participate in our studies, you will come to the MRI center and lie down on your back in a MRI machine (which is like a small open-ended tunnel).

The machine uses radio waves to take the pictures of your brain. The radio waves and magnetic fields used in MRI are **not themselves harmful**, but they do pose a risk in some cases, such as if you have a pacemaker.

Most studies take between 1-2 hours, and pay about \$20 per hour, but the duration and payment depends on the particular experiment. **Are you still interested in participating?**

**If yes.**  
In order to participate and be entered into our database (so that you can be contacted for our studies), the first step is a 5-10 minute phone screening and the second step is to come into the Duke Children's Hospital for a one hour compensated in-person screening. You will receive \$20 and a parking pass for the hospital garage. During the screening, we will collect a health history, have you fill out some questionnaires to see if you are eligible for our studies, and conduct an MRI simulation. **Would you be interested in this screening?**

**If no.**  
Thank you for taking the time to reach out to us and have a great day!

#### **Part II: Screening Questions**

**If yes.**  
Before you can participate in the in-person screening, I need to go over a set of questions with you. If you do not want to answer a question, you do not have to answer it, but then you will not be able to participate.

#### **1. Have you done any previous MRI studies or ever been in a MRI scanner?**

**"Yes."** Ask the subject when and where the session was conducted. Note: prior participation in MRI does not ensure safety!

**"No."** Be especially careful with any subject who has not been in the scanner.

Revised: 03/04/2019

#### **2. Do you have any of the following metal objects in your body?**

a. Implants: pacemakers, cochlear/ear, insulin pump, etc.

b. Fragments: metal working, bullet/shrapnel, etc.

**"Yes."** If they have any implanted metal, then they should not participate in the study or go into the scanner room without approval from Dr. Song. Remember, the scanner room itself can be a dangerous environment for subjects with implanted metal (e.g., pacemakers), so it is important to screen these subjects ahead of time. **[STOP SCREENING – CANNOT PARTICIPATE]**

#### **3. Do you have any of the following metal objects in your body?**

a. Surgical: pins in bones, clamps, valves, catheters, etc.

**"Yes."** Inquire about the type of implant and the type of metal. If they have any implanted metal that is not MR-compatible then they should not participate in the study or go into the scanner room without approval from Dr. Song. Remember, the scanner room itself can be a dangerous environment for subjects with implanted metal (e.g., pacemakers), so it is important to screen these subjects ahead of time.

#### **4. Have you ever worked with metal (e.g. grinding, fabricating)**

**"Yes."** Ask the subject if he or she was ever around **metal shavings**. If **"Yes"**. **[STOP SCREENING – CANNOT PARTICIPATE]**

#### **5. Have you ever had an injury to the eye involving metal or invasive eye surgery?**

**"Yes"**. **[STOP SCREENING – CANNOT PARTICIPATE]**

#### **6. Are you pregnant or think you may be pregnant? (women only)**

**"Yes"**. **[STOP SCREENING – CANNOT PARTICIPATE]**

#### **7. Do you have any permanent makeup or tattoos?**

**"Yes"**. **[STOP SCREENING – CANNOT PARTICIPATE, tattoos below the neck are ok]**

#### **8. Do you have any body piercing that cannot be removed?**

**"Yes"**. **[STOP SCREENING – CANNOT PARTICIPATE]**

**"No. I have piercings but they are removable."** Tell the subject that they should leave all piercings and jewelry at home, or in lockers outside the MR center.

The following questions may preclude the subject's participation in some studies, or may suggest some potential problems:

#### **9. Do you have dental braces, dental implants, or a permanent retainer?**

**"Yes. I have permanent metal dental work."** We currently do not run subjects with permanent dental work because of the potential for an imaging artifact. In addition, some permanent retainers are held in place by magnets.

**"Yes, but it is removable."** All removable metal dental work should be removed before entering the MR room.

**"Are fillings OK?"** Gold and silver fillings are OK for entering the scanner room.

#### **10. Do you feel anxious in small spaces? Would you classify yourself as being claustrophobic? (\*emphasize\*)**

**"Yes"**. Explain the MR environment to them, and describe the study. Tell them that they will in the scanner bore for at least 90 minutes, but will be able to talk with the experimenters in the next room. Let the subject make a decision about whether to participate.

#### **11. Do you use any prescription medications, for example, anti-depressants, anti-anxiety or any hypertension medications?**

Because of the potential effects of some medications upon brain neuronal activity and blood flow, we also ask subjects about the drugs they might be taking

Revised: 03/04/2019

#### **Part III: Result of Phone Screening**

**If they qualify.**  
That is all of the questions. At this point, if you are still interested, we can schedule you for a visit to our MRI facility at Duke for the in-person screening.

**If they do NOT qualify.**  
Unfortunately, you are not eligible to participate in our MRI studies. Because these studies are for research and of no medical benefit to you we must take additional precautions to ensure your safety. If you have any further questions or concerns, you can contact our director, Dr. Allen Song at 681-9337.

#### **Part IV: Voicemail**

Hello,

This is Marissa Bruce from the Brain Imaging and Analysis Center at Duke. I am calling to conduct a quick 5 minute phone screening to see if you are eligible for our studies. If you would like, please give us a call back at 919.681.9344 any time Monday through Friday between 8am-4:30pm. If you prefer, please send an email to volunteer at b-i-a-c dot duke dot edu. That is v-o-l-u-n-t-e-e-r-@-b-i-a-c dot duke dot edu. **Thank you for your time!**

Revised: 03/04/2019



# Examples of Pre-Screening Resources

## ■ BIAC MRI Safety Screening Form

Protocol: \_\_\_\_\_ Exam Number: \_\_\_\_\_ Date: \_\_\_\_\_

**Duke-UNC Brain Imaging and Analysis Center:  
MRI Safety Screening**

All individuals entering the MRI suite must fill out this information to the best of their knowledge. Any potential contraindications must be reviewed with the individual's medical record and the BIAC MR Safety Committee before being cleared to enter the scanner bore.

**Part I: For all individuals entering the scanner room**

Name \_\_\_\_\_ Birthdate \_\_\_\_\_  
Last name First name M.I.

Address \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ Zip Code \_\_\_\_\_ Phone (H)(\_\_\_\_) \_\_\_\_\_ (W)(\_\_\_\_) \_\_\_\_\_ (C)(\_\_\_\_) \_\_\_\_\_

1. Have you ever had an injury to the eye involving a metallic object (e.g. metallic slivers, shavings, foreign body)?  No  Yes  
 If yes, please describe: \_\_\_\_\_

2. Have you ever worked with metal (grinding, fabricating, etc.)?  No  Yes  
 If yes, please describe: \_\_\_\_\_

3. Have you ever had surgery (including eye surgery)?  No  Yes  
 If yes, please describe: \_\_\_\_\_

4. Have you had any previous MRI studies or been in a MR scanner?  No  Yes  
 If yes, please list (most recent first): Body part \_\_\_\_\_ Date \_\_\_\_\_ Facility \_\_\_\_\_  
 If yes, did you have any problems? \_\_\_\_\_

**Before you may enter the scanner room, you must remove all metallic objects.**

|  |  |
|--|--|
| <input type="checkbox"/> All contents of pockets, including back pockets | <input type="checkbox"/> Shoes that contain any metal (e.g., steel tipped) |
| <input type="checkbox"/> Wrist watch, any bracelets                      | <input type="checkbox"/> Hearing aids or other electronic devices          |
| <input type="checkbox"/> Hair pins, clips, weaves, fasteners             | <input type="checkbox"/> Pagers, cell phones, PDAs                         |
| <input type="checkbox"/> Pins or badges on shirt                         | <input type="checkbox"/> Dentures or removable retainer                    |
| <input type="checkbox"/> Belt with metal (e.g., buckle)                  | <input type="checkbox"/> Necklaces, chains                                 |

**Part II: For all individuals entering the scanner bore**

1. Are you claustrophobic?  No  Yes

2. Do you have an IUD or diaphragm containing metal?  No  Yes

3. Are you pregnant, experiencing late menstrual period, or undergoing fertility treatment?  No  Yes

4. Do you currently have a fever or other acute illness?  No  Yes

5. Please list any surgeries or other invasive medical procedures in as much detail as possible:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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Protocol: \_\_\_\_\_ Exam Number: \_\_\_\_\_ Date: \_\_\_\_\_

6. Are you currently taking or have you recently taken any medication?  No  Yes  
 If yes, please list \_\_\_\_\_

7. Do you have anemia or any diseases that affect your blood?  No  Yes  
 If yes, please describe \_\_\_\_\_

8. Do you have a history of stroke, seizures, brain tumor, head trauma, or other neurological disorder?  No  Yes  
 If yes, please describe \_\_\_\_\_

9. Do you wear glasses or contact lenses?  No  Yes  
 If yes, please specify prescription (if known) \_\_\_\_\_

10. Do you have a breathing disorder (e.g., asthma, apnea), heart condition, or movement disorder?  No  Yes

Height \_\_\_\_\_ Weight \_\_\_\_\_ Handedness \_\_\_\_\_

**WARNING:** Certain implants, devices, or objects may be hazardous to you and/or may interfere with the MR procedure (i.e., MRI, MR angiography, functional MRI, MR spectroscopy). Do not enter the MR system room or MR environment if you have any questions or concerns regarding an implant, device, or on object. Consult the MRI Technologist or Radiologist BEFORE entering the MR system room. The MR magnet is ALWAYS on.

**Please mark on the figure(s) below the location of any implant or metal inside of or on your body.**

Revised: 7/28/2017 Page 2 of 3

Protocol: \_\_\_\_\_ Exam Number: \_\_\_\_\_ Date: \_\_\_\_\_

**Please indicate if you have any of the following:**

|  |  |
|--|--|
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Aneurysm clip(s)                               |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Cardiac pacemaker                              |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Implanted cardioverter defibrillator (ICD)     |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Electronic implant or device                   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Magnetically-activated implant or device       |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Neurostimulation system                        |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Spinal cord stimulator                         |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Internal electrodes or wires                   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Bone growth/bone fusion stimulator             |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Cochlear, otologic, or other ear implant       |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Insulin or infusion pump                       |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Implanted drug infusion device                 |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Any type of prosthesis (eye, penile, etc.)     |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Heart valve prosthesis                         |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Eyelid spring or wire                          |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Artificial or prosthetic limb                  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Metallic stent, filter, or coil                |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Shunt (spinal or intraventricular)             |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Vascular access port and/or catheter           |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Radiation seeds or implants                    |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Medication patch (Nicotine, Nitroglycerine)    |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Any metallic fragment or foreign body          |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Wire mesh implant                              |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Tissue expander (i.e. breast)                  |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Surgical staples, clips, or metallic sutures   |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Joint replacement (hip, knee, etc.)            |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Bone/joint pin, screw, nail, wire, plate, etc. |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Dentures or partial plates                     |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Tattoo or permanent makeup                     |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Body piercing or jewelry                       |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Hearing aid (remove before entering MRI)       |
| <input type="checkbox"/> Yes <input type="checkbox"/> No | Other implant _____                            |

**IMPORTANT INSTRUCTIONS**

Before entering the MR environment or MR system room, you must remove all metallic objects including hearing aids, dentures, partial plates, keys, cell phone, eyeglasses, beeper, hair pins, barrettes, jewelry, body piercing jewelry, watch, safety pins, paperclips, money clip, credit cards, bank cards, magnetic strip cards, coins, pens, pocket knife, nail clipper, tools, clothing, with metal fasteners, and clothing with metallic threads. You will be asked to wear ear plugs to protect your hearing during the scan.

Please consult the MRI Technologist or Radiologist if you have any question or concern BEFORE you enter the MR system room.

I attest that the above information is correct to the best of my knowledge. I read and understand the contents of this form and had the opportunity to ask questions regarding the information on this form and regarding the MR procedure that I am about to undergo.

Signature of Person Completing Form \_\_\_\_\_ Signature of Person Screening Subject/Patient \_\_\_\_\_ Date \_\_\_\_\_

Form Completed by:  Self  Parent/guardian  Other relative  Physician

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# Scan Session: UserTest.0I

- UserTest.0I = free testing time
- UserTest.0I = no MRI data, but you can...
  - Set up your protocol
  - Test scanner triggering
  - Time your task
  - See what your stimuli looks like inside the scanner
- UserTest.0I can be scheduled <24 hours in advance
  - Paid study CAN schedule over a User Test!
  - **Please note if you will or will not need a MR Tech**
- We highly recommend scheduling a UserTest.0I prior to your first participant!

# Scan Session: Planning your Time

- A scheduled session must include:
  - (1) **Protocol time**: the time it takes to run a protocol
  - (2) **Breaks**: if there is a short resting period between runs
  - (3) **Set-up time**: the time it takes to review the screening forms and getting the participant set up
  - (4) **Exit time**: the time it takes to get a participant out of the scanner
- Typically allot 15 min beyond your protocol time

# Day of Scan Procedure

Step 1: Escort subject to MRI hallway and ask them to place all belongings into lockers

Step 2: Ask subject to remove all metal objects from their person and place in locker (jewelry, bobby pins, etc.)

Step 3: Ask subject to pat and empty any and all pockets

**All subjects should be MRI ready before entering the console room**

Step 4: If scanning a woman of childbearing potential, conduct the urine pregnancy test

Step 5: Walk subject to console room and have them fill out the *BIAC MRI Safety Sheet*

Step 6: Ask subject to re-check for any metal on their person or in their pockets

Step 7: MRI Tech will review form and begin their scanning procedure

# Scan Session:Visitors

- Visitors and family members are never allowed in the console room
- What are your options?
  - Schedule time in Test I, DHNI, or Mock I\*
  - Parent/guardian can wait outside BIAC5
  - Parent/guardian can wait outside the office suite
  - Parent/guardian can wait in the Children's Hospital Lobby
  - Parent/guardian can sit in the magnet room, if...
    - MR Safety Screening Form completed
    - No contraindications to scanning



# Data Quality and Movement

- When screening subjects before the MRI, incorporating a mock scan can help identify if subjects will be able to remain still for the duration of the scan
- Be observant of medical conditions that may cause greater than normal movement (ex. Bronchitis in the winter months or a common cold)
- Experimenters at the scanner should be observing data acquisition and noting if there are any artifacts
  - If subject movement – remind subject to be still, or if it continues end scan early
  - If artifact from MRI – immediately submit a trouble ticket for review from BIAC Help

# Data Quality and Movement

- Utilize free UserTest sessions on calendar to run through protocol multiple times before beginning data collection
- Consult with BIAC to ensure scanning protocol is correct before booking scanner time
- Data should be reviewed for QA **as soon as possible** after collection
- Utilize the online trouble ticket system to alert BIAC to potential issues with scanning or reach out to Dr. Todd Harshbarger
  - If using a BIAC Volunteer subject, alert Marissa Bruce as well
  - BIAC is not responsible for artifacts related to subject motion

# Scan Session: Hospital Courtesies

- At the hospital, patients and their transporters have the right of way
- Please be sure to wait if patients are in the middle of the MR hallway
- ID Badge must be visibly worn at all times





# Scan Session: Experimenter Courtesies

- Please be sure to wait until the scan before yours is finished, and the participants have exited the console room before entering
- What are your options?
  - Schedule Test I / DHNI / Mock I\* and wait in those rooms
  - Please check the calendar prior to entering a room!
- Please do not wait in the hallways
- Scans are not allowed to run over the scheduled time

# Scan Session: Experimenter Courtesies

- Do NOT train/consent/test subjects in the hallways
  - This includes the round table by BIAC 5
- If it is necessary to talk with a member from another lab, pull them aside and do not talk to them in front of their subjects
- Additionally, a subject may be from a sensitive or vulnerable population and require the undivided attention of the lab team

# Scan Session: Experimenter Courtesies

- After your session, please return all supplies, equipment, and furniture to where they should be so the room is ready for the next User
- If you have plugged in or reconfigured anything to a non-standard configuration, please make sure that you have returned everything to standard configurations

**CLEAN UP  
AFTER YOURSELF,  
YOUR MOTHER  
DOESN'T  
WORK HERE**

# BIAC Resources

# BIAC Resources: Stimulus Controls

- We have many peripherals available for you to use!

- Details instructions can be found here:  
<https://wiki.biac.duke.edu/biac:experimentalcontrol>

## BIAC Stimulus Control System Manual

### Stimulus Control System Layout

- Organization diagram
- Hardware connected to each PC

### Video display

- Using the video projector
- Using the DVD player
- Using the Video switch
- Using the Monitors

### Audio

- Using the audio headphones

### EyeTracker

- Eyetracking in the MRI scanner

### Galvanic skin resistance (GSR)

- Recording GSR in the MRI scanner

### Button Boxes

- Using the 8-button box
- Using the joystick button box

### Head Tracking Device

- Using the head tracker

### Troubleshooting

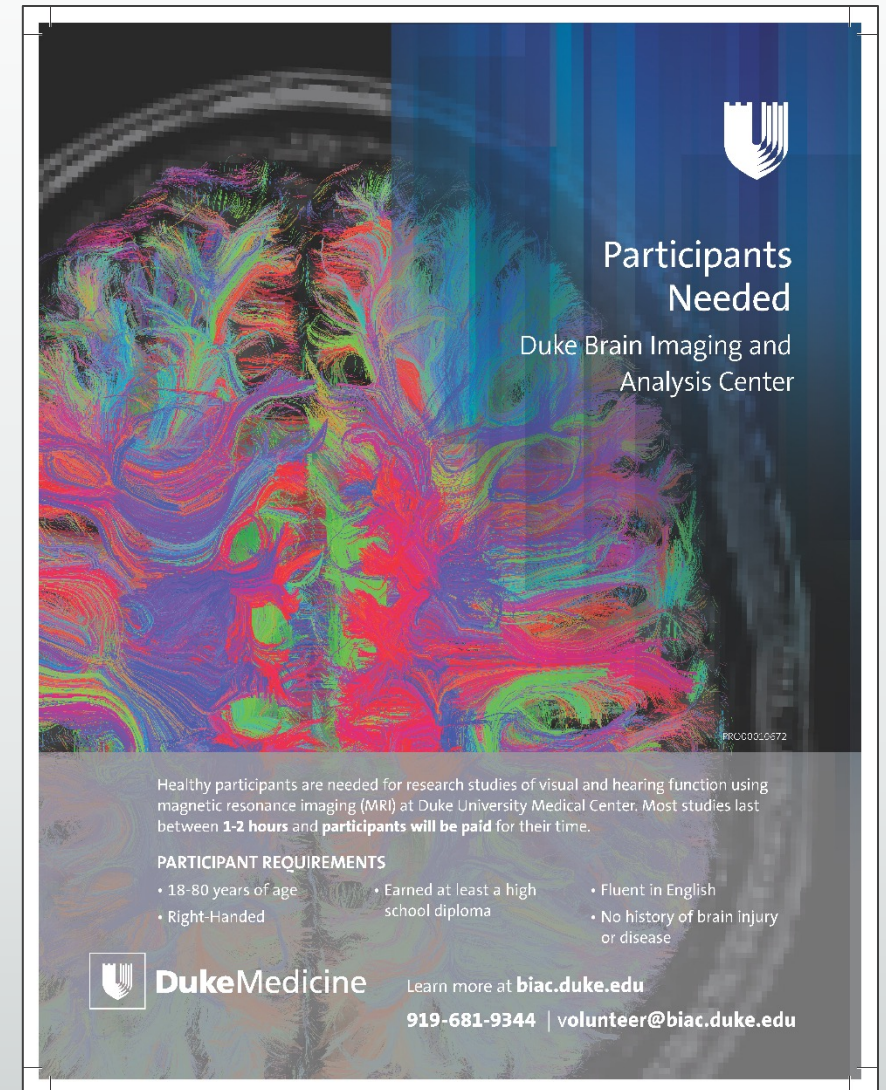
- Troubleshooting

#### Table of Contents

- BIAC Stimulus Control System Manual
- Stimulus Control System Layout
- Video display
- Audio
- EyeTracker
- Galvanic skin resistance (GSR)
- Button Boxes
- Head Tracking Device
- Troubleshooting

# BIAC Resources: Subject Recruitment

- BIAC maintains an active subject pool (~425 members)
- Healthy, “Normal” participants
- Criteria:
  - 18-80 years of age
  - Right-handed
  - Earned at least a high school diploma
  - English speaker (native/fluent)
  - No history of brain injury or disease
  - No anti-depressants, anti-anxiety, or hypertension medication use




Participants Needed  
Duke Brain Imaging and  
Analysis Center

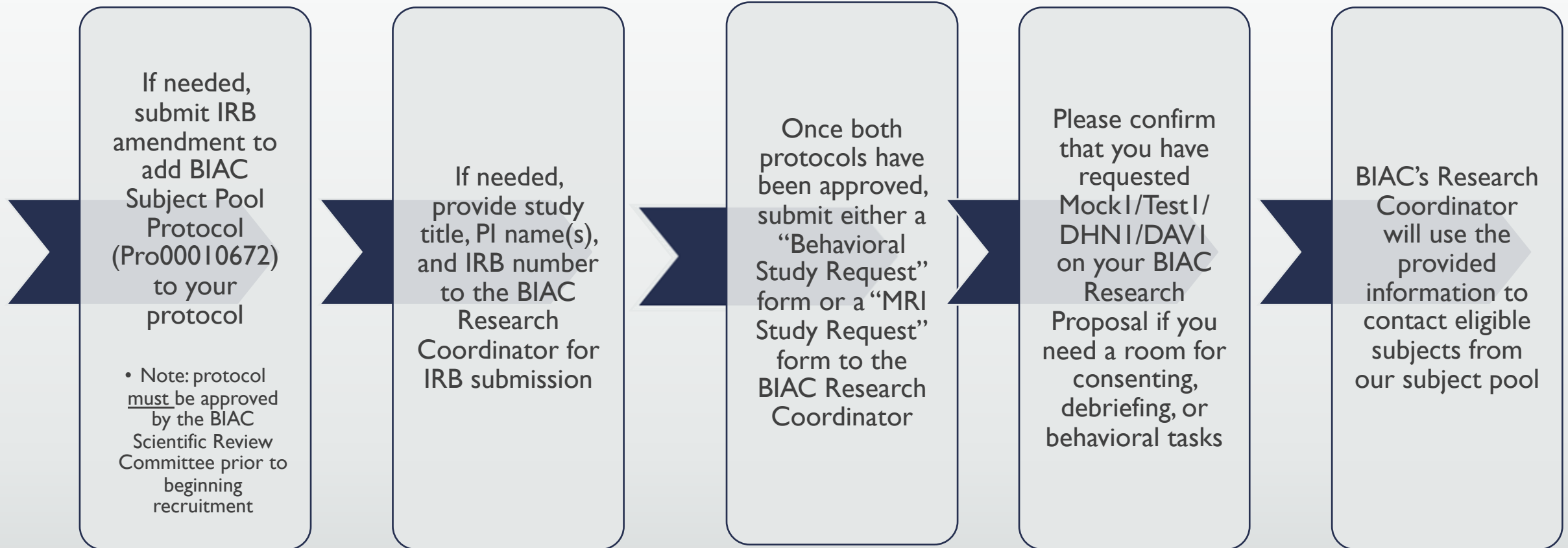
Healthy participants are needed for research studies of visual and hearing function using magnetic resonance imaging (MRI) at Duke University Medical Center. Most studies last between 1-2 hours and participants will be paid for their time.

**PARTICIPANT REQUIREMENTS**

- 18-80 years of age
- Right-Handed
- Earned at least a high school diploma
- Fluent in English
- No history of brain injury or disease

 **DukeMedicine** Learn more at [biac.duke.edu](http://biac.duke.edu)  
919-681-9344 | [volunteer@biac.duke.edu](mailto:volunteer@biac.duke.edu)

# BIAC Resources: Using BIAC Subject Pool



# BIAC Resources: Using BIAC Subject Pool

- Please be aware that we schedule and recruit for many BIAC studies.
- Please provide enough time for IRB amendment approval and/or contacting participants if you need subjects.
- Try to be flexible with your schedule, our scanners have extended hours Monday - Wednesday nights, plus availability on Thursday nights/Saturdays alternate.
- Keep in mind that many of our subjects are students, be mindful of the academic calendar (fall break, exams weeks, major holidays, spring break, etc.)



# BIAC Resources: Subject Feedback

- Please let us know if a subject does not show for a scan as they will no longer be contacted for our studies
- Please let us know if a subject performs extremely poorly on a task, is unusually unmotivated, or falls asleep during the scan
  - We have a two-strike policy with subjects for instances like these, so the more feedback—the better our recruitment can be
- Please let us know if the subject has trouble remaining still during the scan

# BIAC Billing System

# BIAC Billing System

- Each month, we generate invoices for each experiment through the BIAC Scanner Schedule System
  - Invoices will be emailed on the 1<sup>st</sup> business day of the following month
- Calendar entries must be fully documented by the end of the last day of every month. Once the invoices are generated, changes cannot be made.
  - This includes making any lost time claims and/or cancellations

# BIAC Billing System

- Invoices are sent to the individuals that were listed on the initial BIAC proposal form received by the Scientific Review Committee
- These individuals should review the invoices upon receipt and contact [billing@biac.duke.edu](mailto:billing@biac.duke.edu) to confirm the charges
- Payments will be processed within 2-4 days after the invoices are sent out
  - We will charge the last cost object (fund code) that we have on file for the study. If the funding source has changed, please notify BIAC as soon as you have the new fund code. Billing Contacts can view fund code in the Experiment Info Page
- **Updating calendar entries regularly will avoid the need for corrections on the invoices.**

# BIAC Billing System

## *BIAC Scanner Time Invoice*

Please remit payment to: Brain Imaging and Analysis      919-681-9337  
 Center 919-681-7033 Fax  
 Attn: Billing billing@biac.duke.edu  
 Campus Box 3918  
 Durham, NC 27710

**Department      BIAC**

**Responsible Investigator      Allen Song    allen.song@duke.edu**  
**Billing Contact Elena Musty      elena.musty@duke.edu**

**Experiment      [REDACTED]      Cost Object Investigato      [REDACTED]**

| Scanner | Date | Start | End | Exam(s) | Canceled | Lost Time | Overlap | Amount<br>Credit | Amount<br>Billed | Paid to<br>Date | Amount<br>Due |
|---------|------|-------|-----|---------|----------|-----------|---------|------------------|------------------|-----------------|---------------|
|---------|------|-------|-----|---------|----------|-----------|---------|------------------|------------------|-----------------|---------------|

**Current Charges**  
 BIAC6 15-Apr-2019 2:30 PM 3:00 PM 00606      No      0 min.      0 min.      \$280.00      \$0.00      \$280.00  
 BIAC6 25-Apr-2019 3:30 PM 4:30 PM 00645      No      0 min.      0 min.      \$560.00      \$0.00      \$560.00

**Current charges through 4/30/2019 (2 studies)      \$840.00**  
**Past Due charges (0 studies)      \$0.00**  
**Development funds contributed by BIAC      \$0.00**  
**Total for [REDACTED] (2 studies)      \$840.00**

**Current charges through 4/30/2019 (2 studies)      \$840.00**  
**Past Due charges (0 studies)      \$0.00**  
**Development funds contributed by BIAC      \$0.00**  
**Total for Allen Song (2 studies)      \$840.00**

# BIAC Billing System: Helpful Definitions

- **Current Rates (effective 7/1/2018):**
  - Rate for Scans = \$560 per hour
  - Cancellation Fee Rate = \$140 per hour
    - Scans cancelled with less than 48 hours notice will incur the cancellation fee
- **Lost Time:** This is a credit for time/data lost due to a BIAC-related problem. The experimenter should claim this on the BIAC Scanner Schedule
- **Overlap Credit:** This is a credit granted when a paying study takes over a canceled slot and completes the scan
  - **Non-Paying Studies:**
    - UserTest, SysDevelop, SysService, QA, Demo

# BIAC Billing System: Cancellations

- Canceled scans incur a fee at the rate of \$140/hour (effective 7/1/2018)
  - Please note that this charge will only apply to those sessions which are canceled <48 hours of the session start time
- Sessions canceled with >48 hours notice, or due to scanner down time, will have no associated charges.
- If a BIAC MR Tech becomes unavailable for your scan, we will not charge you for the time.

# BIAC Billing System: Cancellations

- The cancellation fee can only be applied to the entire session
  - You will be charged the full rate for your scheduled time, even if you only use a portion of it.
- The earlier you cancel your study on the calendar, the more time another paying study has to take over the slot





FAQs

# FAQs

- Q: I am at the scanner and my session ended and I need more time. What do I do?

# FAQs

- Q: I am at the scanner and my session ended and I need more time. What do I do?
  - A: If the MR Tech and scanner are available (no other session booked), you may continue your scan by adding additional time to the calendar. If you do not add it, the MR Tech will and you will be billed appropriately.
  - A: You can only add time in 30 minute increments. (i.e. If you schedule 30 minutes but need 45, you will pay for 1 hour. The time you schedule on the scanner should be adequate to cover time you enter the console room, until the time you leave. This includes the time for the subject to enter and exit the scanner.

# FAQs

- Q: I no longer need my full time slot, can I cancel a portion of my scheduled scan time for a reduced fee?

# FAQs

- Q: I no longer need my full time slot, can I cancel a portion of my scheduled scan time for a reduced fee?
  - A: You can cancel the portion on the calendar, however you will not receive a reduced fee unless a paying study takes over your time slot (overlap credit will apply). If you scheduled time and run your study, you will be charged for the entire scheduled slot regardless of how much time you use.

# FAQs

- Q: My subject has an implant/device/object but says they have had a MRI scan since then. Do I still need to get the MR Techs to clear it before their scan? Even if the scan was done at Duke?

# FAQs

- Q: My subject has an implant/device/object but says they have had a MRI scan since then. Do I still need to get the MR Techs to clear it before their scan? Even if the scan was done at Duke?
  - A: YES! You will still need to have the implant/device/object cleared by the MR Techs at least 3 days prior to the scan.
  - A: YES! Both 1.5T and 3T scanners are used clinically, so implants/devices/objects that were at one time cleared for 1.5T have not all been cleared for 3T.

Next Steps...



# Next Steps...

- (1) Review and Sign-Off on the BIAC SOPs listed on the “Signature Sheet: Level I MRI Access” form
  - Please include the date you attended the NUO
- (2) Complete the MRI Safety Screening Form
  - If you already have a *MRI Safety Form* on file, then you do NOT need to complete a new one
- (3) Return completed and signed form to BIAC Main Office (in person/email)
- (4) Email [help@biac.duke.edu](mailto:help@biac.duke.edu) with your your Duke Unique ID and your HID-Activated Card Number

Questions?

Thank you for attending the  
BIAC New User Orientation!

